

REMARKS

Reconsideration and allowance of this application are respectfully requested in light of the above amendments and the following remarks.

Claims 20, 22, 23, 34-36, 39, and 40 have been amended in the manner suggested in the Advisory Action for overcoming the pending rejections. Support for the amendments is provided for example in original claim 2 and paragraphs [0032], [0033], and [0051]-[0053] of the published specification. (It should be noted that references herein to the specification and drawings are for illustrative purposes only and are not intended to limit the scope of the invention to the referenced embodiments.)

Claims 20-23, 25-29, 31, 34, and 37-40 were rejected, under 35 USC §103(a), as being unpatentable over Kotzin et al. (US 6,173,005) in view of Ooba (US 6,717,929). Claims 35 and 36 were rejected, under 35 USC §103(a), as being unpatentable over Kotzin et al. (US 6,173,005) in view of Ooba (US 6,717,929) and Kanemoto et al. (US 2002/0160721). Claims 32 and 33 were rejected, under 35 USC §103(a), as being unpatentable over Kotzin et al. (US 6,173,005) in view of Ooba (US 6,717,929) and Onggosanusi et al. (US 2003/0016640). To the extent these rejections may be deemed applicable to the amended claims, the Applicant respectfully traverses based on the points set forth below.

Claim 20 now defines a CDMA transmitting apparatus that independently sets spreading factors, the number of spreading codes, or the number of spreading codes assigned to one transmitting party in first and second spreading sections that spread parallel data to be transmitted by separate MIMO antennas.

The subject matter of claim 20 provides an advantage of maintaining spectral efficiency of communicated data and improving the error rate characteristics of received data (see specification page 3, lines 13-18).

Kotzin discloses a transmitting apparatus that assigns Walsh codes for setting different spreading codes in first and second spreading sections (see Kotzin, Fig. 8 and col. 13, lines 3-25). Ooba discloses a receiving apparatus having an adaptive array antenna with a number of receiving antennas matching a number of spreading sections and the spreading code of each spreading section is set different so as to determine the preferred direction of arrival for a received signal (see Ooba col. 2, lines 43-61). Thus, Ooba's disclosure of associating different spreading codes with different reception antennas for the purpose of obtaining directivity for a received signal does not provide a motivation to modify Kotzin's transmitting apparatus to achieve the claimed subject matter.

More specifically, the teachings of Kotzin and Ooba do not suggest the Applicant's claimed subject matter of independently setting spreading factors, the number of spreading codes, or the number of spreading codes assigned to one transmitting party in first and second spreading sections.

Accordingly, the Applicant submits that the teachings of Kotzin and Ooba, considered individually or in combination, do not render obvious the subject matter now defined by claim 20. Independent claims 39 and 40 now similarly recite the above-mentioned subject matter distinguishing apparatus claim 20 from Kotzin and Ooba, but claim 39 does so with respect to a method. Independent claim 35 now defines a receiving apparatus corresponding to the MIMO transmitting apparatus defined by claim 20, and Kanemoto does not supplement the teachings of

Kotzin and Ooba with respect to the above-mentioned subject matter distinguishing claim 20 from Kotzin and Ooba.. Therefore, the rejections applied to claims 32 and 33 are obviated and allowance of claims 20, 35, 39, and 40 and all claims dependent therefrom is deemed to be warranted.

Moreover, claim 35 defines a CDMA receiving apparatus that separates varying data from signals received through first and second antennas using a difference in characteristics of propagation channels.

The Final Rejection acknowledges that Kotzin does not disclose this subject matter (see Final Rejection page 12, lines 5-8). To overcome this deficiency, the Final Rejection proposes that Kanemoto discloses "separator and observing characteristics ... such as FER, FEC, BER" (see page 12, lines 9-11).

However, the Applicant respectfully notes that a frame error rate (FER) and bit error rate (BER) identify the information loss rate for a communication link, whereas forward error correction (FEC) is an information coding/decoding technique that supports correcting erroneously received information. Contrary to the position taken by the Final Rejection, FER, FEC, and BER do not separate data received from multiple antennas and therefore *per force* do not perform such data separation using a difference in characteristics of propagation channels. Ooba is not cited in the Final Rejection for supplementing the teachings of Kotzin and Kanemoto in this regard.

Accordingly, allowance of claim 35 and dependent claim 36 is deemed to be warranted for this independent reason.

In view of the above, it is submitted that this application is in condition for allowance, and a notice to that effect is respectfully solicited.

If any issues remain which may best be resolved through a telephone communication, the Examiner is requested to telephone the undersigned at the local Washington, D.C. telephone number listed below.

Respectfully submitted,

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